

LITHUANIA

VILNIUS

“E-CITY for all”

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# 1 Report on the project

## 1.1 Inception

The inception phase started with a comprehensive survey and a study of similar initiatives in e-city related both in Lithuania and in the rest of the world. It was needed to develop and decide which ideas and projects will be given priority and moved forward first. At the inception, there were identified more than 20 potential projects. After a careful analysis and extensive discussions and brainstorming with the beneficiary, three as the most beneficial and perspective were chosen: 1) E-transport, 2) Open digital administration, 3) Infokiosks, and 4) City e-planning. It was decided to extrapolate them further and choose 1-3 the most perspective and beneficial and meeting strategy aims of Vilnius municipality. During the inception stage, the detailed activities plan was prepared also.

After the release of ERDF guidelines in the area of “Information Society development” and preparing economic and benefit analysis, it was realised that initially proposed project ideas do not meet the guidelines requirements or do not provide expected economic and financial return on planned investments, it was decided to develop two projects in the areas of E-transport (e-Ticketing and Passenger Information System for Public Transport) and “Open digital administration” project idea was converted into “Vilnius Municipality E-procurement system”.

## 1.2 Project feasibility studies

During the project, two extensive feasibility studies for “e-Ticketing and Passenger Information System for Public Transport” and “Vilnius Municipality E-procurement system” were prepared. The E-transport feasibility study preparation in addition to Vilnius municipality also involved Kaunas and Klaipėda municipalities that slightly complication work and required additional communication and taking into account different partners interests and

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### 1.2.1 E-Ticketing and Passenger Information System for Public Transport

The preparation of all required documents for Intelligent Transport Systems was foreseen in Inception Report. Intelligent Transport Systems include 32 fundamental services defined by the International Organization for Standardization (ISO). All these 32 services have a lot of sub-services. The description of these services is provided in Annex 8. During the e-City project all these 32 services have been analysed very carefully.

Several meetings with the representatives of Vilnius Municipality company “Susisiekimo paslaugos” were held while preparing the Feasibility Study of “Intelligent Transport Systems.” During the discussions, it was stated that it would be rational to prepare this project not only for the city of Vilnius but also for Kaunas and Klaipėda. Representatives of public enterprise “Klaipėdos keleivinis transportas” and Kaunas’ representatives also took part in further discussions.

In order to analyse the best practice of Intelligent Transport Systems and possible application to Vilnius, Kaunas and Klaipėda thousands pages of related information have been analysed. After long discussions with different stakeholders from Vilnius, Kaunas and Klaipėda only small part of Intelligent Transport Systems services were included in the development of Investment Project and Tender Dossiers:

- Transportation Planning Support.
- Pretrip Information.

- On-Trip Driver Information.
- On-Trip Public Transport Information.
- Personal Information Services.
- Route Guidance and Navigation.
- Public Transport Management.
- Electronic Financial Transactions.

Another part of Intelligent Transport Systems services (see Appendix 5) can be employed for Lithuania in the future projects.

Possible financing restrictions as well as the utility of the provided services for the groups concerned were the main criteria in selecting rationally the services for the project from the 32 “Intelligent Transport Systems” services.

After the analysis of information systems of public transport operators in European Union countries, the United States of America, Australia, Japan and other countries, the main functions performed by the information system of Lithuanian public transport operators (OIS) were offered. Moreover, having performed the analysis of passenger information systems of public transport in many developed countries as well as the variety of passenger requirements in different countries of the world, the main requirements posed for Passenger Information System (PIS) of Lithuanian public transport were offered and their present possibilities were described. The offered OIS and PIS correspond with the highest world requirements.

In the project of creating the operator and passenger information system of public passenger transport of all Lithuania, some of its elements were foreseen for implementing in further stages of the project:

- Operators of private sector of Lithuanian public passenger transport (buses, minibuses and taxis) will be granted the possibility to use PIS and OIS free of charge. They will have to fill in the necessary databases, do the calculation etc themselves. As the result, the availability and accessibility of this information will depend upon the wish and financial possibilities of private sector operators and necessary though not very big financial opportunities.
- At the beginning, PIS and OIS are going to be implemented in Vilnius, Kaunas and Klaipėda. Other operators of public passenger transport of Lithuanian towns and regions will be granted the possibility to use PIS and OIS free of charge. They will have to fill in the necessary databases, do the calculation etc themselves. As the result, the availability and accessibility of the information on public passenger transport of Lithuanian towns and regions will depend upon those operators.

Experts have prepared the Feasibility Study “Payment and Management System of the City’s Passenger Transport – Electronic Ticketing” (Annex 7), which will afterwards be transformed into the Feasibility Study “E-Ticketing and Passenger Information System for Public Transport” (Annex 1).

## **1.2.2 Vilnius Municipality E-procurement system**

European Union Commission in its eEurope action plan envisage until the end of 2003 year, 30 percent of public procurement procedures do through electronic means. Though this plan seems to be overoptimistic Governments of European Union countries seek in the next 5-7 years to move public procurement processes into electronic environment. In Lithuania, Lithuanian Public Procurement Office to the Government of the Republic of Lithuania in its 2004-2006 strategic plan aims “to create positive environment for transitioning procurement procedures into electronic environment”.

Every year Lithuania makes public procurement acquisitions of about 4 billions Litas (1,2 billion Euros). This amount is expected significantly increase during the next following years. Vilnius municipality accounts about 1/5 of those acquisitions and is one of the largest Lithuanian public procurement subjects. Current Lithuanian procurement law essentially foresees only two public acquisition ways: tenders and negotiations. Generally, the cycle of one acquisition takes at least some months and very small fraction of procurement procedures is conducted using electronic means. In some cases, even if documents are delivered by electronic means, they need to be followed and confirmed at later stages by paper-based documents.

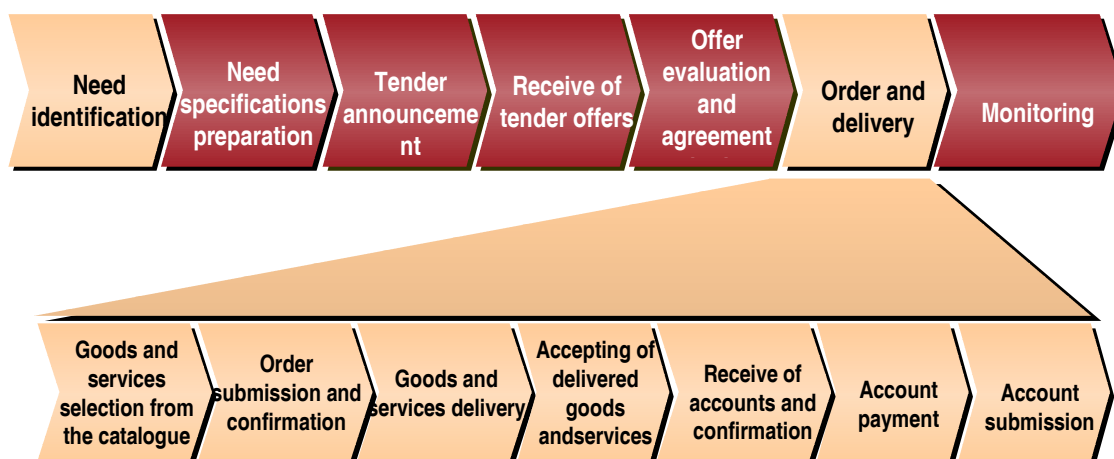
Implementing transition of public procurement procedures into electronic means, it is very important that all the procurement procedures were automated and moved into electronic environment. Though Lithuanian Public Pro-

urement Office to the Government of the Republic of Lithuania has some aims to implement some centralised e-procurement means, it is very important that local municipalities would implement their own e-procurement procedures such as acquisition planning and acquisition values accounting, goods and services ordering, payment for the supplied services and goods, acquired goods and services accounting, control and analysis. Major envisaged benefits of implementing e-procurement system are the following:

- Better acquisition value estimating and more appropriate acquisition way selection;
- Reduced employees' and suppliers spent time, lower services and goods acquisition costs;
- More transparent and easier controlled acquisition process.

It is noted that e-procurement procedures are closely related to organisations resource planning and finance and accounting systems, thus they are generally implemented at organisational level. Implementing e-procurement system at Vilnius municipality it is envisaged to integrate it with central Lithuanian Public Procurement Office to the Government of the Republic of Lithuania and/or Central Acquisition Agency databases and information systems, enabling to use their centralised tender announcement and organisation information systems, electronic supplier catalogues and reverse auction instruments.

Below it is provided full procurement process diagram at Vilnius municipality . Municipality e-procurement system will be closely integrated by open standards and protocols with Lithuanian Public Procurement Office to the Government of the Republic of Lithuania and other institutions related to public procurement in Lithuania and European Union, if needed.



“Vilnius Municipality E-procurement system” project major aims are the following:

- To implement Vilnius municipality e-procurement system, covering public acquisitions and procurement planning, good and services ordering and payment for the received services and goods modules;
- To integrate Vilnius municipality e-procurement system with Lithuanian Public Procurement Office to the Government of the Republic of Lithuania and guarantee its interoperability, openness and adaptability at other Lithuanian municipalities and local public institutions.

The expected results of the project are the following:

- Re-engineered and improved Vilnius municipality procurement processes and procedures;
- Implement e-procurement system at Vilnius municipality and its related organisations;
- Vilnius municipality employees trained to work with the implemented system;
- Vilnius municipality suppliers trained to work with the implemented system;
- Vilnius municipality suppliers can participate in Vilnius municipality organised procurement processes through electronic means;

- Achieved results and experience during the implementation of the project disseminated to other Lithuanian municipalities and other local government organisations and provided possibility to use the implemented system itself.

In order to implement the project, the following activities suggested to be conducted:

- Preparation of project implementation, setting-up project office, contracting needed consultants and training project personnel;
- Tender for acquiring e-procurement system;
- Preparation for the system implementation;
- System implementation and pilot usage;
- Dissemination of the project major results and best-practice.

It was suggested by the experts to seek the following quantitative results for the project:

<b>Indicator</b>	<b>Measure unit</b>	<b>Expected quantitative result</b>
Set Vilnius municipality's procurement processes and procedures	Procedure released and approved number and approved	Prepared and adopted all with procurement related processes and procedures
Implemented e-procurement system at Vilnius municipality and its related organisations	Units	1
Train Vilnius municipality employees to work with implemented e-procurement system	Number of employees	At least 200 employees
Train Vilnius municipality suppliers to work with implemented e-procurement system	Supplier number	At least 400 potential suppliers
Disseminate experience and results to other municipalities and local governments in Lithuania	Number of courses, seminars and public campaigns.	Conducted at least 10 seminars and training courses in public e-procurement field. It will be published guidelines with suggestions and recommendations in the field of public e-procurement area, and guidelines how to organise e-procurement processes at local government level. public and provided opportunity to try and use implemented e-procurement system. It will also be created website with actual information in the area of e-procurement at local government level.

**During the analysis of the project, the following expected results of the project were identified:**

<b>Indicator</b>	<b>Measurement unit</b>	<b>Expected quantitative result</b>
Reduced procurement transaction costs	units	Reduction of costs up to 6 times
Reduction of procurement duration up to minimum	Days	Up to 1 day

Shortened procurement time	Times	Up to 5
Automation of procurement process from planning to bill payment	Working hours	Reduction up to 15% working hours
Detailed analysis of acquisitions made	Transparency of the processes	Improved information availability and access to it by citizens and business subjects
Reduced prices of supplied goods and services	Percentage	10-20%
Reduced costs of potential suppliers in relation to participation in tenders	Times	5

### 1.3 Follow-up Proposals

When the project “e-Ticketing and Passenger Information System for Public Transport” is implemented, it would be reasonable to develop the Intelligent Transport Systems in Lithuania in the following ways:

1. Draft the Lithuania’s Strategy of the Intelligent Transport Systems (ITS).
2. Implement ITS means which may help to reduce number of accidents, cushion their outcomes, reduce the time necessary for the arrival of emergency teams. The main application areas may be speed management and monitoring of drivers and means of transport. A number of means implemented in this sphere would increase safety of vulnerable road users, especially children, elderly people and the disabled.
3. Implement the developed Public Transport Passengers’ Information System (PIS) and Operators’ Information System (OIS) in integrated manner throughout Lithuanian. PIS and OIS will be installed in Vilnius, Kaunas and Klaipėda in the first place. Public transport operators of other Lithuanian towns and settlements will be allowed to use PIS and OIS for free. They will have to enter data to certain databases, calculate, etc. by themselves. Therefore, availability and accessibility of information about public transport of other Lithuanian towns and settlements will depend on these operators and local municipalities.
4. Develop Information System for Drivers of Individual Means of Transport; part of the developed Passengers’ Information System may be used for its development. Using this system they may get better information about the forthcoming trip and its conditions, including information about traffic-jams and the weather, which is renewed every minute, information about the route, possibility to follow the route, reserve places, find services for passengers, manage trip demand, etc.
5. Implement e-ticket system in all Lithuanian. Striving that operators do not repel and mislead passengers, it is important to use coordinated systems and equipment for e-ticket issuing, identification and reading, value calculation and estimation of the remaining value. Thus we strive using uniform tickets in the whole territory of the country. For this purpose activities of operators must be coordinated and integrated. In may be claimed that the coordinated systems and equipment for e-ticket issuing, identification and reading, value calculation and estimation of the remaining value is useful to all operators.

6. Implement ITS means, which may help to reduce air pollution problems. Most towns install ITSs in order to solve air pollution problems, especially in town centres. Air pollution increases in the event of traffic jams, therefore any ITS which improves traffic effectiveness also reduces air pollution. There are other more specific services:
  - Pollution monitoring.
  - Information about air quality.
  - Control of access to substantially polluted zones.
7. Integrated implementation of the developed Passengers' (PIS) and Operators' (OIS) Information Systems in the private sector of public passenger transport (buses, minibuses and taxi) in Lithuania. These operators will be allowed to use PIS and OIS for free. They will have to enter data to certain databases, calculate, etc. by themselves. Therefore, availability and accessibility of this information will depend on the will of private sector operators and use of necessary small funds.
8. Adjust public transport to the disabled to a greater extent. Public transport receives lots of criticism from the disabled (the blind, people with movement disability, etc.). Today operators of public transport are required to install automatic bridges for the boarding of the disabled, because an increasing number of people use wheelchairs; such people need more attention from drivers. In such cases a driver who regulates the bridges, should have the equipment necessary for voice messages. People with weak eyesight also should be able to see necessary information on the display; it should be readable. Information system for the disabled is used in many countries. Managers and other people working in public transport companies should pay more attention to the disabled.
9. Implement other Intelligent Transport Systems (ITS):
  - Systems of commercial means of transport (automated inspection of roadside safety, safety monitoring in a means of transport, administering of commercial means of transport, reaction to the accidents when dangerous materials are involved, information about freight location and delivery time forecasting).
  - Damage Situation Management Systems (messages about damage situations and personal safety, management of means of transport in the event of damage situations).
  - Advanced systems for the control and safety of means of transport (avoidance of longitudinal crashes, avoidance of side crashes, avoidance of crashes at crossroads, better visibility which helps avoid crashes, stopping systems activated before crash), etc.

Regarding “Vilnius Municipality E-procurement system” project the following main conclusions and suggestions may be drawn-up:

- Implementing e-procurement system at Vilnius municipality is very beneficial and should be given a priority for the project.
- Implementing e-procurement project successfully at Vilnius municipality may require co-operation with Lithuanian Public Procurement Office to the Government of the Republic of Lithuania, which though preliminary agreed to cooperate at the initiation stage of the project, later refused to cooperate at the intended level.
- Consider adding to the E-procurement project development more modules from Financial and Accounting system or try to implement both the systems simultaneously.
- To start implementing e-procurement systems in the field of “Usual commercial practice”.
- Vilnius municipality suppliers are in support of e-procurement system and its implementation would reduce their costs related to participating in tender procedures significantly and they are in a big favour of such system implementation.
- Currently, some departments of Vilnius municipality are quite independent in procurement procedures and may resist to expected higher procurement centralisation within Vilnius municipality.
- E-procurement system implementation may require re-engineering of some of current procurement procedures and processes in order to achieve as high as possible benefits from e-procurement system implementation